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MEMOIR

OF THE LATE

LEWIS DAVID VON SCHWEINITZ, P. D.

WITH

A SKETCH OF HIS SCIENTIFIC LABOURS.

READ BEFORE

THE ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA,

May 12th, 1835.

BY WALTER R. JOHNSON.

PUBLISHED BY ORDER OF THE ACADEMY.

PHILADELPHIA:
PRINTED BY WILLIAM P. GIBBONS,
Sixth and Cherry sts.

1835.

Lewis D. Schweinitz

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MEMOIR, &c.

Among the small number of native Americans, who had thirty years ago begun to make natural history an object of deep and curious research, is the name of one whose memory may, upon various grounds, claim the respect and veneration of all the admirers of scientific excellence. It is not less a dictate of the head, than an impulse of the heart, to honour those who have stood forth as the leaders in new, useful, and difficult enterprizes. Even persons who themselves never enter the same career, may still participate largely in the sentiment of gratitude for those efforts which have had in view, the improvement of society by additions to its treasures of knowledge. But the obligation to respect, is felt with a double force by those whose pursuits are of a character congenial with that of the individual, who has thus made himself a pioneer in a laudable undertaking. And if to this common bond be added that of personal intercourse and intimacy, and a reception of great and lasting benefits from his labours and his liberality, it must be obvious that reason, feeling, and duty, alike demand the grateful remembrance of one who has

so judiciously directed the current of his kindness and bestowed the fruits of his industry.

Standing in this relation to the object of the following brief memoir, the members of the Academy of Natural Sciences are probably prepared to expect from their organ on the present occasion, but an imperfect representation of the emotions which were felt on learning the demise of our late valued associate, and perhaps to excuse a still more imperfect display of his various attainments and excellencies of character.

Lewis David Von Schweinitz was born at Bethlehem Northampton County, Pennsylvania, on the thirteenth of February, 1780. His father Hans Christian Alexander Von Schweinitz was of an ancient and distinguished family in Silesia in Germany, and exercised here, the functions of superintendent of the fiscal and secular concerns of the "Unitas Fratrum" or *Moravian Brethren* in North America. His mother was Dorothea Elizabeth de Watteville, daughter of Baron, afterwards Bishop, John de Watteville and of Benija who was a daughter of Count Zinzendorf. Of the last mentioned ancestor, it may not, for reasons which will appear in the sequel, be inappropriate to make a passing reminiscence.

Nicholas Lewis Count Zinzendorf was born at Dresden in 1700, and was celebrated in his youth for forming religious societies, six or seven of which, are said to have originated from his own efforts, and one at least to have been planned at the early age of ten years.

He was associated with Watteville in founding the great missionary system of the "Unitas Fratrum." At

the age of twenty-one he became Count of Berthelsdorf in Lusatia by purchasing the estate appendant to that title and soon after established there the village of Herrnhut whence the Moravians are sometimes called *Herrnhutters*. In prosecution of his favourite scheme, he, in connexion with his new colony, many of whom were natives of Moravia, commenced the sending of missionaries to instruct the heathen; and at the end of nine years, though their numbers did not, when they first made the attempt, exceed 600, had actually formed establishments in Greenland, St. Thomas, St. Croix, Surinam, Rio de Berbice, among the Indians of North America, and the Negroes of Carolina, in Lapland, Tartary, Algiers, Guinea, in the Island of Ceylon and at the Cape of Good Hope. In his ardour for attaining this favourite object, Zinzendorf made various journies through Germany, Denmark, Switzerland, Holland, England and America. In 1742 he held frequent religious discourses at Germantown, in this vicinity, and in the same year, in a Latin speech delivered in Philadelphia, formally renounced his title of Count, resumed his original family name of Von Thumsteen, and became familiarly known to the Quakers of that period under the designation of "friend Lewis."

It was under his immediate agency that the colony at Bethlehem was founded. He did not, however, attain all his successes without undergoing both in Europe and America several bitter persecutions: but these probably served, as usual, only to bind his followers in a firmer union, and more effectually to insure their prosperity. After having established his plan in all the four quarters of the

globe, and sent out about 1000 individuals to proclaim his doctrines, he finally died at Herrnhut in 1760, where we are informed, his obsequies were attended by 2000 of his followers, and his body borne to the grave by 32 of those messengers of his faith who were at the time assembled there from Holland, England, Ireland, Greenland and North America.

The contemplation of this example, of a man who was at once the ancestor of his family and the father of his denomination, with that of other distinguished progenitors, early impressed the imagination of the youthful Schweinitz with an ambition for a career of similar activity, and gave the first impulse towards the acquisition of literary and scientific eminence.

The society of those friends with whom the early years of his childhood were spent, was calculated to inspire him with the same affections and views which had operated on his ancestors for two generations. His mind was here imbued with those principles, which, at a later period, shone forth in the purity and simplicity of his manly character.

Endowed with powers of conception of no ordinary cast, he gave early indications of his bias for intellectual pursuits, and by his assiduity more than compensated for any deficiency in the means of improvement then within his reach. The clear and explicit manner in which his juvenile ideas were expressed, encouraged his fond parents to indulge the hope, that he would one day become an active instrument for advancing the cause to which themselves and their predecessors had been so

assiduously devoted. Being the *eldest* son of his parents, and, at that period, of delicate constitution, it is reasonable to suppose that maternal influences had much to do in the developement of his faculties. It was, moreover, on the side of his mother that he was related to Watteville and Zinzendorf; hence, we may readily suppose that from this source he derived the partiality for addressing to his friends short speeches and little sermons with which he is said occasionally to have amused the circle around his paternal fireside.

We are aware that, in general, anticipations founded on an exhibition of precocious talents are apt to be signally disappointed ; but when the display is that of an intellectual *tendency*, rather than a mere capacity for some one attainment, and when the *spirit* for mental labour is found capable of being directed into different channels at the instance of others, and does not consist of a blind instinct compelling the possessor to follow some narrow path of intellectual effort, the augury may, we apprehend, be received with less doubt and uncertainty. Such was the case with Schweinitz. His mind was vigorous and his temperament enthusiastic. The *first* direction of these qualities was given by his relatives as they dwelt on the unwearied and successful exertions of his ancestors among the fraternity, in promoting whose interests he was taught to feel that it would be most honourable to excel ; the *second* was subsequently given by his teachers, when, by the casual exhibition and explanation of some specimens in natural history, they struck a vein of talent, part of

the same rich mine, which had before only here and there "cropped out" above the surface.

On the 4th of July, 1787, at the age of little more than seven years, young Lewis David was placed in the institution of the Moravian community at Nazareth, where he continued for eleven years, or until 1798, and where he sedulously availed himself of every opportunity for the acquisition of knowledge. The period of instruction,—as generally happens when parental precept and example have prepared the way for a relish of knowledge,—was to him a season of delight, a scene of his life to which he ever after reverted with peculiar pleasure. Here were formed those habits of practical wisdom, which, when subsequently methodized in the schools of Germany, produced that happy balance of the faculties, without which the most brilliant talents may be wasted, either on ill-directed efforts, or on wild and fanciful theories. His powers of language, and his vein of satirical humour, were at this time occasionally put forth in the form of poetical effusions, turning the fruits of his leisure hours into harmless amusement for his companions.

The apparent facility with which he afterwards composed in the Latin language, induces the belief that his early classical instruction was of a very respectable order, and certain it is that the qualities of his heart were not neglected; his moral character was built on the broad and liberal basis of justice, love and charity so distinctly inculcated in the doctrines of his community.

In the baneful spirit of uncharitableness he saw nothing either lovely or respectable; it never found a lodging in his heart, and he had, accordingly, no occasion in after life to eject so unprofitable a tenant.

His first impulse towards the study of Botany had been received at Nazareth, before being placed as a pupil in the institution. When a mere child, being on a visit to that place in company with his grandfather, Bishop de Watteville, it chanced that a specimen of the *Lichen digitatus*, lying on a table in one of the apartments of the school, attracted his attention, and led to a few observations on its name and physiology. From this moment he dated his own partiality for the beauties of the vegetable kingdom. When his abode was afterwards fixed at the school, and he enjoyed the advantage of some instructions in the elements of botany from one of the teachers* in the seminary, he pursued his researches in this delightful science with the most enthusiastic ardour. He seems to have been, in truth, a very child of Flora, and with the vernal breath of that divinity to have inhaled all the benign influences which the beauty, simplicity and grandeur of *Nature's truth* are every where fitted to inspire.

A partial flora of Nazareth and its vicinity, formed at this early period, is still among his manuscript papers, and the occupation which its composition afforded to his moments of relaxation, continued through life to constitute the delight of his leisure hours. Such was his progress in manly attainments, that before the close of

* Mr. Kramtsch.

his connexion with the Nazareth institution, young Schweinitz was appointed to participate in the duties of instruction, by taking charge of some of the junior classes in that seminary.

In 1798 his father was called to Germany, whither he was attended by his family, and where the subject of this memoir, then a youth of eighteen, was in the same year established as a student in the theological institution at Niesky in upper Lusatia. Here, enjoying an intercourse with young men of decided and acknowledged talent, and entering on studies which excited a generous emulation, his faculties were roused to redoubled energy, and his application became proportionally intense. The late excellent J. B. de Albertini, then one of the professors in that institution, exercised a powerful influence on the mind of Mr. Schweinitz, and to his clearness and simplicity of views, his scientific and truly philosophical ideas, was the subject of our remarks indebted for much of that justness of thought and firmness of principle, which carried him with success through the active duties of life. The mutual esteem thus formed between the pupil and his teacher was afterwards, by similarity of pursuits and predilections, matured into the closest intimacy. While prosecuting his studies in this place, Mr. Schweinitz enjoyed, by means of his extensive connexions, an opportunity of mingling much in society, of which his cheerful and sprightly conversation rendered him the common centre of attraction. But neither in this situation, nor in his subsequent foreign journies, did his feelings ever swerve from an

attachment to his country ; and yet it was not from him that any modern traveller has learned the practice of vilifying every country through which he passes, much less, on returning home, that of bestowing on his *own*, by way reparation, a double share of the same abuse.

After completing his theological studies, Mr. Schweinitz engaged as a teacher in the Academy at Niesky, and by this means, enlarging and strengthening his own acquisitions, realized the truth of the maxim, *docendo discimus*.

The presence of several valued friends engaged in the same pursuits, the cultivation of his favourite department of botany, a connexion with his cherished associates, Professor Albertini and Henry Steinhauer, (from England,) and the opportunity of improving his taste for literature by various reading and frequent composition on the prominent subjects discussed in the literary journals of the day, all contributed to the improvement and happiness of Mr. Schweinitz, and rendered the arduous duties of his station a pleasure rather than a burthen. Scarcely any important topic in the wide field of science, escaped his notice, and especially did the constitution and management of the affairs of his social and religious fraternity, call forth from his pen many able and spirited articles.

From the commencement of his residence at this place, his botanical researches had been particularly directed to the *Fungi*, a department previously much neglected, and in 1805 the number of new genera and species discovered by himself and Albertini was so great as to warrant

the publication of a volume of about four hundred pages, containing the result of their united efforts. As we shall again recur to this, in connexion with his other performances, it will not be necessary here to interrupt our remarks to present its peculiar merits as a scientific production.

Near the close of his residence at Niesky he began to exercise the functions of a preacher, and was, in 1807, called to the Moravian settlement at Gnadenburg, in Silesia, where his acquisitions were soon turned to good account in various ways connected with his profession. Besides parochial duties, he again discharged the office of a teacher, in bringing forward many of the young men of his community, who were preparing for the duties of his own calling. Upon his character as a preacher, there is the less necessity that we should comment, even were this the place, and were we competent to such an undertaking, because, in that capacity, his brethren have already exhibited to the public a view of his meritorious labours.* We would merely state, that, considered as literary performances, his sermons were characterized by the utmost simplicity, both in style and delivery, and were addressed more to the heart than to the head. His discourses were invariably practical, not argumentative;—experimental, not speculative.

The period of which we are speaking, it will be recollected, was that of Buonaparte's continental wars, and Germany, the scene of his operations. Mr. Schweinitz

* See the United Brethren's Missionary Intelligencer, vol. v. p. 97.

was, therefore, with his peaceful flock, brought into immediate proximity to the actors in those tremendous conflicts. But, though troops were quartered in Gnadenburg, his happy disposition and winning deportment gave him such ascendency over all ranks as to avoid causes of collision, and to render him a general favourite with strangers.

In 1808 Mr. Schweinitz was invited to Gnadau, in Saxony, where, in the discharge of duties similar to those at Gnadenburg, and with equally distinguished success, he continued to be engaged until 1812, when he was appointed by his brethren, general agent of their church in the southern states of this Union. Previously to repairing to the scene of his duties, he formed a matrimonial alliance at Niesky, with Louiza Amelia Le Doux, whose parents, descendants from highly respectable French ancestors, resided at Stettin in Prussian Pomerania. The continental system of Napoleon at that time rendering direct communications with this country extremely hazardous, they were compelled, in order to embark for the United States, to take the route through Denmark and Sweden. This circumstance was not wholly without its advantage; for, on arriving at Kiel in Holstein, an occasion presented itself for a protracted stay, during which Mr. Schweinitz became acquainted with several learned men connected with the University in that place, and the mutual satisfaction was such as to induce the institution during the same year to confer on him the honorary degree of Doctor in Philosophy.

About the period of their final embarkation, the United States had declared war against Great Britain; the seas swarmed with privateers, and to try their firmness still more severely, a tempestuous voyage ensued, terminating in a tremendous storm, by which their vessel was dismasted, and a horrible suspense for a time hung over their destiny.

A journal kept on this voyage manifests, however, the fervent and patriotic feeling which cheered the heart, and buoyed up the hopes of Mr. Schweinitz, in the near prospect of extensive usefulness in the land of his nativity.

The immediate scene of his duties was the establishment at Salem, Stokes county, North Carolina, where amidst the secular and ecclesiastical duties of his office, he found time to prosecute the study of botany, in a dominion, scientifically speaking, *all his own.* The first fruits of this labour were given to the world in 1818, through the commentaries of the Society of Naturalists at Leipsic, under the editorial care of his learned friend Dr. D. F. Schwaegrichen, and is entitled "Synopsis Fungorum Carolinæ Superioris." In the same year his duties required him to attend a meeting of his religious brethren at Herrnhut. On his way thither, he visited England, France and Holland, where he established correspondencies which were afterwards of great service, when, on his return, he began the formation of a regular herbarium.

In 1821 Mr. Schweinitz published, at Raleigh, N. C. a pamphlet containing a description of seventy-eight

species of *Hepatic Mosses*. This he produced as a mere specimen of the cryptogamic flora of North America, intended to excite a more general attention among our native botanists, to this undeservedly neglected branch of natural history. In the same year he sent to Professor Silliman's Journal his Monography of the genus VIOLA, a valuable paper, often cited by European naturalists.

At the close of this year his residence was transferred to his native village of Bethlehem, where the secular office of general agent for his brethren was retained, the charge of superintending the institution for the education of females accepted, and the study of his darling science unremittingly pursued. To range once more, in the vigour of his scientific maturity, over the same scenes in which had been sown the seeds of his usefulness, and where had budded the promises of his early youth, imparted new energy and assiduity to his efforts. The beautiful slopes and valleys about Bethlehem and Nazareth, the romantic banks of the Delaware, and the precipitous rocks of the Lehigh, all yielded up to him a tribute of their hitherto unexplored treasures. The high estimation set upon his works by men of science, had procured his election as an honorary member in several societies devoted to natural history, both in Europe and America. His correspondence increased, and the formation of his herbarium advanced with great rapidity.

In 1823 he was desired to examine and describe the plants collected by Mr. Say on the expedition of Major

Long to the sources of the St. Peter's river. This task he undertook with that diffidence which signalized his real merit, expressing his regret that the unavoidable absence of Mr. Nuttall from the country should have prevented *him* from executing this undertaking, agreeably to previous arrangement, and passing on that gentleman a high and delicate eulogium; how richly merited, this Academy needs not to be informed.

Near the close of the same year, he also communicated to the Lyceum of Natural History at New York, a valuable paper, containing instructions for determining the American species of the genus CAREX, a work, which, though less imposing in appearance, must doubtless have cost more intense application, and more exact powers of discriminating between specific characters, than would have sufficed for the description of many new species of plants.

In 1824 Mr. Schweinitz communicated to the American Journal of Science a short paper on the rarer plants of Easton, Pa., almost all of which, he remarks, are principally met with on the shady rocks up the Delaware, or at the mouth of the Lehigh.

In the same year appeared his Monograph of North American Carices. Being about to embark a third time for Europe, this paper, together with a large collection of the specimens from which it had been prepared, was placed in the hands of his friend, Dr. Torrey, with a desire that it might be communicated to the Lyceum of Natural History, and giving him full liberty to use his discretion in the additions or altera-

tions which it might, from subsequent discoveries of his own, seem to demand. Finding, on his return, that his editor had made important additions to the number of species, the honourable mind of Mr. Schweinitz led him to request that it should appear as their joint production, remarking that "the judicious and elaborate amendments he has proposed, and the mass of new and valuable matter he has added, entitle Dr. Torrey to a participation in the authorship of the work." This incident is mentioned only as indicative of the feelings and dispositions of the man.

The voyage this year undertaken, was with a purpose similar to that of 1818, and on both occasions he exercised on the deliberations of his brethren at Herrnhut a decided and salutary influence.

During his absence from the country his paper on the new American species of Spheriæ, one of the largest genera of the Fungus tribe, was communicated to this Academy, and appeared in the fifth volume of the Journal.

On his return, near the close of the year, his pursuits, except the superintendence of the literary institution, which he had previously relinquished, were resumed, with his wonted alacrity. The great work to which he now devoted his leisure was the Synopsis of North American Fungi, which was originally designed for publication in some of the European journals, but which he was induced to present, in 1831, for insertion among the collections of the Philosophical Society of this city.

Until the year 1830, the health of Mr. Schweinitz

had been excellent, and his spirits uniformly cheerful; but the various and increasing cares of his official station, with the sedentary employment of composing a dissertation on the affairs of his community, during which his usual excursions and exercise were omitted, wrought a visible change in the state of his health; a severe cough ensued, with other alarming symptoms, which gave his friends just grounds for apprehension. From this time his health seemed gradually to decline. The want of his accustomed occupations in the open air also depressed his spirits, and produced a marked contrast to that buoyancy which had hitherto shed its influence on all around him.

A journey to the western states, undertaken in connection with his official duties,* appeared, for a short time, to revive the energies of his frame. But though externally more active and cheerful, the deep workings of disease had undermined his system, and on the morning of the 8th of February 1834, being awakened at an early hour by a sensation of faintness, and when relieved by medical applications, again relapsing for a short time into a state of repose, he fell, at the age of 54 years, calmly and unconsciously into the arms of death.

A widow, and four sons at an age most needing a parent's counsel, survive to mourn his loss.

Such, gentlemen of the Academy, is a very inadequate view of the life of your lamented associate; a life of various, constant, unobtrusive usefulness.

* For the purpose of establishing a branch of the "United Brethren's" community in Indiana.

In person, Mr. Schweinitz was of the middle stature, of full and robust habits, a florid and healthful countenance. The print accompanying this paper is from a miniature, taken some years before his decease, and is consequently more youthful than the appearance with which our memories are now impressed, but is regarded by his family as having been a very correct likeness at the time it was taken. We have space but for a few words in regard to his social habits.

The colloquial powers of Mr. S. were of a high order. Humour, wit, anecdote and repartee were always at his command. In the multiplied relations with society he had contracted that ease of intercourse which tends so essentially to conciliate the kind affections.

Hence, though always listened to with profound respect when in the discharge of professional duties, whether as a teacher or a clergyman, yet the sphere of his greatest usefulness was the *social* circle, and the familiar intercourse which he maintained with the people of his own persuasion. In the exchange of thought, the imparting of sympathy, and the expression of fraternal feeling, so habitually cherished by the class of society with which it was his fortune to be connected, and in the deep sense of responsibility under which he appears to have constantly acted, we find the immutable guarantees for that uprightness and the best explanation of that social influence which characterized our departed friend.

The literary attainments of Mr. Schweinitz were those belonging to the scholar and the gentleman. He was acquainted with the Greek and spoke and wrote the

English, German, French and Latin languages. Unlike most persons of German descent, but in common with Pope, Scott, and some other eminent men, he was entirely insensible to the charms of music; yet as we have seen, this circumstance did not involve him in the celebrated category of Shakespeare; for though *no music*, he surely had abundance of *harmony* in his soul.

Our sketch of the scientific labours of the deceased, must necessarily be confined to some leading points in the general character of his more important works, and a brief account of his collections.

When we consider the extreme difficulty of the particular departments of Botany to which Mr. Schweinitz devoted his chief attention, the prodigious number of facts which he has accumulated, the vast amount of minute and delicate investigation demanded by the nature of the objects of his study, the labour of preparing for the press the materials which he had brought together; when we recollect, that, with the exception of Dr. Muhlenburg of Lancaster, no American botanist had ventured far upon this wide and unexplored dominion of nature; and when we remember that this science was his relaxation, not his profession; his occasional pursuit, not his daily duty, we are forcibly struck with the high order of his talents for the pursuit of physical science, and cannot but regret that more of his time and energies could not have been devoted to this favourite occupation.

The botanical works of Mr. Schweinitz indicate, not only great industry and perseverance in the collection

of facts, but a judicious *method* in the prosecution of his labours. The synoptical tables attached to his several monographs, are evidences of the importance attributed to this feature in his productions. His analytical table to facilitate the determination of the Carices, affords another striking illustration of the benefit to be derived from a systematic pursuit of scientific studies. It contains an abstract view of 110 antithetical positions of parts, which mark the species of that extensive and difficult genus; and since this analytical table was doubtless the result, in part, of his own inductive studies, it proves that of those studies he was able to make a legitimate and profitable use, by arranging all his facts under appropriate, general heads, and to point out to future inquirers, in what paths to pursue the labours, which himself has so happily followed. His monograph of the Carices of North America, soon after published, gave proof of the utility of this methodical arrangement.

Among the most extensive, and, in a scientific point of view, the most important of his labours, are those which relate to the Fungi. Four of his principal performances refer to this abstruse branch of botany.

Three of them, the "Conspectus Fungorum Lusatiæ," the "Synopsis Fungorum Carolinæ Superioris," and the "Synopsis Fungorum in America Boreali Media Degentium," are all, as their titles import, written in the Latin language. The mere reader of English may, perhaps, be ready to ask whether this was not a

mark of scholastic vanity, thus to seal against the majority of readers, the very books which profess to make known his discoveries. To this, we may answer promptly and decidedly in the negative. For, if written either in German or in English, the two other languages with which he was, probably, the most familiar, they must have been sealed against a far greater number of those who are ever likely to seek instruction from their pages. A few inquisitive botanists are found in every quarter of the globe, and the medium of communication between them is the same as that of the whole scientific world was three centuries ago. It was to these that Schweinitz was obliged, from the nature of the case, to address himself, and to these he spoke in a language which they all, doubtless, understood.

It may, in the next place, appear singular that so great a part of his exertions should have been devoted to the cryptogamous races. But to this preference he had, by birthright, a sort of hereditary, or derivative national title, since it is to *German*, Danish, and Swedish botanists* that we owe by far the greater part of our knowledge of that difficult department. In fact, German botany, like German metaphysics, appears to deem the obvious, every-day phenomena of a science, utterly unworthy of her regards. Phænogamous plants want the charm of an adequate mystery; things are

* The botanist will readily recal to mind, in addition to the names of Schweinitz and Muhlenburg, among ourselves, those of Weber, Schwaegrichen, Roth, Nees, Fries, Link, Kunz, Schræder, Tode, Hoffman, Hedwig, Withering, Gärtner, Schæffer, Batsch, Wahlenberg, Schkuhr, Schwartz, and many others, as illustrations, more or less apposite, of our position.

too apparent to the senses; lie too much upon the surface; there is nothing of the spirit of adventure; nothing of the Giant of the Brocken to be encountered.

But, set before her a turf studded with mosses—a clump of twenty different sea-weeds, a bundle of a hundred strange ferns, a basket of innumerable new fungous parasites; or, in defect of any thing more exquisite, a load of nameless sedges and grasses, and there is at once a banquet for her keen appetite to revel on,—a truly "*dignus vindice nodus.*"

And who shall venture to accuse this far-reaching and deep-searching propensity of the northern botanists? Certainly not one who has never entered beyond the outer gate of this chosen sanctuary of nature.

It is probable that even the greater number of professed botanists are little attentive to the wide extension given by nature to the cryptogamic races. Fungi, as well as the other classes in this great division of her works, are spread over almost every sort of vegetable matter, whether in the dead or the living state. They are to be met with in wells, mines and caverns, as well as in the garden, the field, and the farm yard; on decayed branches, stumps and roots of trees; on the bark, beneath the epidermis, and amidst the inner coats of growing timber; on the petioles and nerves of dry leaves; on the ground, amidst dense forests—lawns, marshes and meadows. One* inhabits only the decaying hoofs of horses and horns of oxen, while another† is no where

* *Onygena equina.* † *Onygena corvina.*

to be met with, except on the bones and feathers from a particular species of raven. Among trees, the fir, the poplar, the oak and the birch, are peculiarly marked by the variety and abundance of these parasitic genera. They not unfrequently occur in the interior of the trunks of timber-trees. Mr. Schweinitz had in his collection, fine specimens of the *Dematium aluta*, taken out of the ships of war built by our government, on Lake Erie, where, in a few years, he remarks, "this little fungulous enemy completely destroyed that fleet which had so signally vanquished the armament of Britain."

It was remarked by the cynic of old, when a pampered mouse had perched himself on a corner of his table, awaiting the eleemosynary crumb which the habit of intimacy between the two individuals had taught him to expect, that even Diogenes, too, had his *parasites*. If it be true, that all men, however humble, have their appropriate adherents—how much more so, when we descend to the inferior orders of creation? Scarcely, it is believed, can a species of animals, whether they inhabit air, earth, or ocean;—whether they proudly soar or lowly creep, be found, unattended by those which occupy, in regard to them, a parasitic character.

It will be remembered that in one of the papers of our late lamented SAY, the parasitic insect, which feeds upon the Hessian fly is described. The study of cryptogamic botany makes known innumerable examples of the same general fact, in regard to that great department of nature's works.

In the synopsis of the "Fungi of Lusatia," the authors

have, with becoming spirit, discarded the too frequent practice of writers in changing the names of plants, and adopting new synonyms, merely, as would often appear, to compel future naturalists to cite their own names in connexion with the trivial specific appellations which they choose to affix to well known objects. This course they avoided under the conviction that natural history had received, and was daily receiving, great detriment from the accumulation and confusion of these synonyms.

They have, moreover, assiduously avoided superfluous repetitions of the names of classes, orders, genera, and species, and given a true *synopsis* of the department which they professed to treat. They have followed the steps of Persoon, sensible that though his method may be in some points defective, it is better not to depart from so able a guide; for, they remark, "it is well known how much easier it is to find fault with our neighbour's house than to build a better and more commodious one ourselves." "A solid basis to this department of botanical science," they add, "must be laid, not on a sandy foundation, on the varying freaks and fancies of the mind, but on a perpetual daily and nightly employment of microscopic observation, a diligent and oft repeated examination of the whole history of the fungous tribes, a careful perusal of authors, a comparison of their respective synonyms, and above all, by the observation of living nature herself, as she unfolds her rich abundance in the recesses of forests, lawns and marshes; an observation which must be continued from day to day, and

from year to year, if we would reap the true reward of our labours."

At the period when Schweinitz and Albertini wrote, there had been recently broached, in some of the German journals, particularly Voight's Magazine, certain monstrous hypotheses, concerning the very nature of the fungi, and "which one could scarcely credit his senses in perusing;"—hypotheses which ascribed the existence of several species of these plants to mutations of form, and to a diseased condition of one and the same species of Zoophyta; alleging that the *Tubulina fragiforma* was nothing more than the progeny of the *Phallus impudicus*, which, growing old, at length became metamorphosed into the *Lichen paschalis*; thus, in the mere wantonness of authorship, confounding, with one scrawl of the pen, two great classes of the vegetable world, and blending both into the animal kingdom. This was to make vegetable life, indeed, Protean. The like undiscriminating heedlessness had led the writer to assure his readers that a fungus discovered by Hoffman, in the *Trichoderma roseum*, furnished with curious and delicate little filaments, was nothing more than a zoophyte, with six arms. Against these, and many similar heresies and hallucinations, the authors do not fail to caution their readers.

This work was prepared under several disadvantages. The German writers on cryptogamia had, it is true, been found of great service in determining nice and difficult questions, and to them Albertini and Schweinitz repeatedly acknowledged their obligations; but they

had to lament that their remoteness from the richer treasures of scientific truth, the vast libraries of metropolitan cities, did not allow them to consult the productions of Bulliard, Sowerby, Bolton, Shæffer, Mitchel, Batsch, and others. At a subsequent period, when treating of the fungi of America, Mr. Schweinitz was enabled to profit by the contemporary labours of those whom he is pleased to term the coryphæi of mycological science, such as Fries, Nees, Link and Kunz, and he then takes occasion to remark, that all the genera described by them are likewise found in America, and that indeed but few species are known in Europe, (except those parasitic fungi which belong to a matrix not here produced,) but what are equally the products of both continents. This seemed conclusively to refute the notion that fungous forms are the mere fortuitous generation of accidental causes, and incapable of definite classification.

It is not, perhaps, among the least interesting and creditable circumstance connected with the publication of this work, that the twelve plates containing figures of ninety-three new species of fungi were drawn, engraved, and coloured by the hands of Mr. Schweinitz himself. We are assured, by one who was at that period his pupil, that he "recollects the untiring research with which our departed friend, amidst the various arduous duties of his office, (that of tutor at Niesky,) pursued his favourite study, and the labour bestowed by his own hands on the coloured plates of the well known "*Synopsis Fungorum.*" The modesty with which the

plates are submitted to the public, marks, in a distinct manner, both the meritorious character of the man, and the style of his Latin composition:

"*Si quis severior tabularum nostravum contemplator, nonnulla in iis, nec fortasse pauca, desideraverit—eum, ne prima sese artis excusoriæ tirocinia, unico scientiæ amore duce et auspice tentata, coram habere obliviscatur, rogatum velimus.*"

One might hazard the opinion, that even in more recent works of natural history, many far less creditable specimens of the same art have found place, without being able to urge the apology that they were the first efforts of a tiro, and without the commendatory plea that the sole love of science had guided and ushered them into public view.

In his paper on the genus VIOLA, Mr. Schweinitz makes the interesting remark, that of all the American species of violet, thirty or more in number, not one has an identical counterpart in any European species; that not more than one of the latter appears to have become naturalized in America; and that while Europe possesses about twenty species of this interesting genus, America has, as above stated, already numbered thirty, and probably may yet add others from future exploration of her extensive northern regions.

In his descriptions of new American species of the genus Spheriæ, contained in the fifth volume of the Journal of the Academy, Mr. Schweinitz states, that of 528 species which Dr. Fries describes, 330 had been observed by

himself in America, and that besides what Fries had incorporated in his general abridgement, the new species amounted to 112, making the whole number then known, 640; that the whole number of American fungi, then observed, (1825,) fell little short of 2000. He adds, "I am fully persuaded, as many more remain undiscovered. Our immense forests, humid climate, and variety of high rank vegetable productions, may well warrant this conclusion."

In this paper he describes twenty new species of American Spheriæ, respecting which he remarks, that very few, peculiar to America, spring directly from the soil, that is, from vegetable mould,—for *none*, in fact, spring solely from *rocks*, or their *unvegetalized* debris. Nearly all the fungi, peculiar to America, are parasitic, and this, considering the vast number of peculiar plants and trees of the higher orders, found in our country, may still account for the almost incredible multitude of fungous forms, belonging exclusively to this continent.

His last published performance contains the names of 3098 species of North American fungi, of which more than 1200 are the fruits of Mr. Schweinitz' own labours, embracing, of course, the species previously described in his paper on the Spheriæ, and those included in his Carolina synopsis. If to these, we add those plants described in his other performances, we have an aggregate of nearly 1400 new species added to the amount of botanical science, by the talents and industry of a single individual; a number constituting no contemptible por-

tion of the whole amount of human knowledge on this subject.*

At the decease of Mr. Schweinitz, the whole of his rich collection passed, by bequest, into the possession of this institution.

Independent of the fungi and other cryptogamous specimens, not yet arranged, or even fully examined since their arrival, the herbarium thus bequeathed to the Academy by our deceased fellow member, contains about twenty-three thousand species of plants, either collected by himself, or procured through the agency of his numerous and valuable correspondents. Among the latter, the examination has shown that many names, high in science, are included.

Of European plants, many were furnished by Dr. Schwaegrichen, of Liepsic, author of the *Prodromus Historiæ Muscorum Hepaticorum*, and already mentioned as the editor of one of Mr. Schweinitz' publications; others, by Dr. Steudel, author of the *Nomenclator Botanicus;* some were obtained from his attentive and valued correspondent Dr. Zeyher, and others from the well known naturalist, M. Brongniart, of Paris.

From M. Ledebour author of the *Flora Altaica*, Mr. Schweinitz received most valuable contributions of Altaian and Siberian plants, originally discovered by that traveller in his Asiatic journies, and described in the work just mentioned. From Dr. Wallick, superintendent of the Botanic Garden at Calcutta, and editor of an

* The whole number of species at present known, has been estimated at 60,000.

edition of the *Flora Indica*, he obtained numerous species of the plants of India, particularly of Napaul.

From M. Ludwig, through the kindness of his friends Leutner and Saynisch he became possessed of the rare and interesting species from South Africa.

By W. J. Hooker, Esq. of Glascow, author of a *Monograph of the Jungermaniæ* and the *Flora Scotica*, he was furnished, among others, with specimens of those hardy tribes of plants, which had been brought by Captain Parry, from the polar regions of North America. James Reed, Esq. of this city supplied the plants of China.

A very valuable collection from Labrador, was presented by his friend, Kohlmeister, Moravian missionary at Nain, in that country.

The labours of Mr. Martius enabled *him* to send to to the herbarium of our deceased benefactor, the botanical treasures of Brazil.

Our worthy correspondent, Dr. Hering, furnished those which adorn the fertile plains of Surinam, and Major Leconte, of the United States' army, placed in his hands an important collection of the plants of Georgia. Most of the existing botanists of our country had, also, manifested their esteem by transmitting to their respected fellow labourer, some of the fruits of their industry and research. But Mr. Schweinitz did not rely solely on correspondence and exchanges, for the augmentation of his herbarium.

After the decease of our late Vice President, Zaccheus Collins, Esq., Mr. Schweinitz became the purchaser, for a valuable consideration, of that part of his herbarium known as the *Baldwin collection*, containing

plants from Florida, Brazil and Buenos Ayres, among which he found more than three thousand species, not before in his own herbarium, and of these, more than one-half, it is believed, have never yet been described in any publication.

Thus, through the liberality of the deceased member whom we now commemorate, the donations which, in his life time, Mr. Collins had bestowed on the museum of our institution, are once more united to his other most important botanical treasure.

The examination and arrangement of these new plants constituted some of the last scientific labours of Mr. S. and he derived from the employment, such satisfaction as to make him, for a time, forget the bodily suffering and the mental depression under which his frame, at length, gave way.

Increased by all these rich and varied additions, the botanical department of our museum having previously acquired the entire collection of Mr. Nuttall,* besides valuable contributions from our president, Mr. Maclure, and others, now embraces about 28,000 different species of plants; more than three-quarters of which are, as we have seen, due to the industry and liberality of a single individual.

The whole is now arranged† after the neat and judi-

* The *American* plants of Mr. Nuttall were, in part, a donation from that gentleman, and, in part, obtained by a subscription among several public spirited members of the Academy. For his *exotics*, amounting to several thousands, we are wholly indebted to the liberality of Mr. N.

† The Academy owes to the indefatigable labour of the Chairman of its Botanical Committee, Dr. Charles Pickering, the prompt execution of this task, and the compiler of this notice is happy to acknowledge his obligation to the same gentleman for many of the facts above stated in regard to the herbarium.

cious manner of Mr. Schweinitz, into scientific order, on a plan to embrace the previous collection of the Academy, secured, as far as practicable, from the depradations of insects, and easy of access for the purposes of research and comparison. But the direct legacy of Mr. Schweinitz is, probably, not the only favour which is due to his scientific character and labours. It has been remarked that our institution owes to members of his community, a greater portion of its valuable collections in different departments, than to any other equal number of individuals, and it is reasonable to suppose that his example, as a cultivator of science, has, in no small degree, determined the preference of those over whom he so long, and so beneficially, exercised an influence.

Such, may I repeat, was the life, and such the labours of our departed associate; a life which humanity may contemplate with a calm delight; labours which science may review with a noble satisfaction.

With a laudable emulation of all the excellencies which had, before his own day, given lustre to his name, and a clear perception of the truth that the virtue of ancestors sheds no *honour* on any but the *virtuous* of their offspring; with a zeal for the acquisition of knowledge, which, springing from an innate law of his being, afforded to his understanding that pure gratification, which, by another law of his being, knowledge alone could impart; with a benevolent desire to communicate whatever of delight the investigations of science and literature had infused into his own heart; with a love for the beauties of nature, imbibed almost in infancy,

and which grew with the increase of every faculty, and lasted to the closing period of his too short career; with a purity of mind and heart which made every truth of nature a lesson in virtue; with an intrepidity in the prosecution of scientific enterprizes which led him out of beaten tracks, and taught him to find pleasure in threading those very labyrinths from which most other travellers in the paths of knowledge, shrink in despair; with a clearness of method which enabled him to communicate to others the full advantage of his own discoveries in these mazy haunts of nature; with a candour and fairness which never merged the man of honour in an effort unduly to elevate the man of science; never sought, by questionable artifices, to obscure or to hide the just reputation of others; with a benevolence of disposition which enabled him to find every where, in works of creation, the traces of that beneficence, which, in his *professional* character, it was his highest pleasure to pourtray, and his most ardent desire to imitate; with a cheerfulness of disposition, and a suavity of manners, which rendered him an object of deep affection in every social relation; with a rectitude of purpose which won the confidence, while it formed the character of youth,—and secured the gratitude, while it watched over the interests of age; with an assiduity which encountered the fatigues of many voyages, not always without peril, in the service of that cause to which he was devoted; with a patient continuance in years of toilsome effort, to extend, by precept and example, the benign system of practical goodness and spiritual libe-

rality which ever shone in his life and actions; with a distinct perception that the treasures accumulated in a life devoted to science, are not for individual possession, but, in order to produce their due effect, must, in some degree, be imparted as a common inheritance to the heirs of his genius and spirit; with these and similar characters which time might fail us to enumerate, did our deceased fellow labourer fill up the measure of his usefulness, and win for himself a title to the lasting gratitude of his fellow beings.

We should not dare to undertake the delicate task of assuaging that grief which the loss of so much merit must have occasioned. It is, fortunatley, to be drawn from a source more elevated than our feeble voice: The remembrances of a well spent life, are to the bereaved heart, assurances more strong and consoling than the loftiest eulogies of man,—and there is no support to the virtue of orphanage more sure than the noble example of that personal excellence to which the orphan's memory is taught, habitually, to revert. Happily for the domestic circle of our departed associate, they need not desire a firmer guarantee for their hopes, nor a brighter example for their imitation, than are to be found in the character of Lewis David von Schweinitz.

APPENDIX.

The following are the full titles of Mr. Schweinitz' scientific publications, as far as we have been able to collect them. Of the other productions of his pen, many of which were published in foreign countries, and some of which still remain in manuscript, we have not been so fortunate as to obtain copies in time for this memoir:

1. Conspectus Fungorum in Lusatiæ superioris agro Niskiensi crescentium e methodo Persooniana. Cum tabulis XII. æneis pictis, species novas XCIII. sistentibus.

Auctoribus J. B. de Albertini,
L. D. de Schweinitz.

Lipsiæ, 1805. (*Sumptibus Kummerianis.*)

2. Synopsis Fungorum Carolinæ superioris secundum observationes Ludovici Davidis de Schweinitz, Soc. Nat. Cur. Lips. Sodalis, etc.

Edita a D. F. Schwægrichen.

E commentariis societatis naturæ curiosorum Lipsiensis excerpta. (*No date.*)

3. Specimen Floræ Americæ Septentrionalis Cryptogamicæ, sistens muscos hepaticos hucusque in Am. Sep. observatos, or

Specimen of a systematic arrangement and descrip-

tion of the cryptogamous plants of North America, comprising a diognostic description of all the hepatic mosses hitherto observed in North America, with ampler descriptions of a number of new species.

By Lewis D. de Schweinitz, P. D.

Raleigh, N. C. 1821.

4. Attempt of a monography of the Linnæan Genus Viola, comprising all the species hitherto observed in North America. By Lewis D. de Schweinitz.

Communicated [to Prof. Silliman,] July, 1821.

5. A Catalogue of Plants, collected in the Northwestern Territory, by Mr. Thomas Say, in the year 1823. By Lewis D. de Schweinitz.

Philada. 1824.

6. Analytical table, to facilitate the determination of the hitherto observed North American species of the genus Carex. By Lewis D. de Schweinitz.

Read [at the New York Lyceum of Nat. Hist.] Dec. 8, 1823.

7. List of the rarer plants found near Easton, Pennsylvania.

Communicated [to Prof. Silliman] through Mr. John Finch. 1824.

8. A Monograph of the North American species of the genus Carex.

By Lewis D. de Schweinitz and John Torrey.

Read [before the New York Lyceum of Nat. Hist.] Dec. 13, 1824. Edited by Dr. Torrey.

9. Description of a number of new American species of Spheriæ.

Read [before the Acad. of Nat. Sciences of Philad.] Feb. 15, 1825.

10. Synopsis Fungorum in America Boreali media degentium.

Communicated [to the Amer. Phil. Soc. of Philad.] April 15, 1831.

Tabular view of the Botanical works of Mr. Schweinitz, arranged in the order in which they were published, with the extent of each, the number of objects embraced, and the new genera and species described in each performance.

Titles.	*Where published.*	*Date.*	*Whole No. of genera included.*	*Whole No. of species included.*	*New genera described.*	*New species described.*	*Pages of the paper and their size.*	*Species or genera figured.*	*Remarks.*
Conspectus Fungorum Lusatiæ, &c.	Leipsic.	1805	72	1130	2	127	412 8vo.	93 species in 12 plates.	Plates drawn, engraved and coloured by Mr. Schweinitz.
Synopsis Fungorum Carolinæ Superioris.	Leipsic Soc. Nat. Curiosorum Commentariis.	1818	76	1373	3	315	105 4to.	2 plates of new genera.	The date of this paper is only mentioned on personal information.
Specimen Floræ Americæ Septentrionalis Cryptogamicæ. (Containing the Hepatic Mosses.)	Raleigh, N. Carolina. Pamphlet form.	1821	7	76		9	27 8vo.		
Monography of the Genus Viola.	Silliman's Journal, vol. v. p. 48.	1821	1	30		5	34 8vo.		A synoptical table is appended to this paper.
Plants collected during Long's second Expedition.	Keating's Nar. of Long's 2d Exp. vol. ii., Phil.	1823	94	130		11	21 8vo.		
Analytical Table to determine the Carices.	Ann. of New York Lyceum, vol. i.	1823					10 8vo.		With 110 antithetical positions of spch. & reference to several new species.
List of the Plants of Easton, Pa.	Silliman's Journal, vol. viii. p. 267.	1824	85	150		4	2 8vo.		
Monograph of North American Carices.	Ann. of New York Lyceum, vol. i. p. 283.	1824	1	113		6	90 8vo.	6 plates of new species.	
New American Species of Sphæriæ.	Journ. of the Acad. Nat. Sc. of Phil. vol. v. p. 3.	1825	1	20		15	14 8vo.	2 plates of new species.	
Synopsis of North American Fungi.	Trans. Am. Phil. Soc. of Phil. n. s. vol. iv. p. 141.	1831	246	3098	7	1203	177 4to.	1 plate of new genera.	This synopsis contains the fungi described in the papers 2 and 9.